

# The birds of South Georgia

by P. A. Prince & J. P. Croxall

Received 12 June 1995

The current checklist of South Georgia birds (Prince & Croxall 1983) is now over 13 years out of date. Until 1982, rather few ornithologists visited South Georgia and most bird records were provided by members of the British Antarctic Survey (BAS) from their year-round base at King Edward Point, Cumberland Bay, or from the summer-only field station at Bird Island (see Prince & Payne 1979, and Fig. 1). Since the South Atlantic conflict in 1982, however, BAS operations have been confined to Bird Island (a year-round base since September 1982) and, in several recent summers, field parties at Husvik. The greatest change, however, has been in the frequency of visits by naturalists and ornithologists, particularly on the ships of the Royal Fleet Auxiliary (RFA; and including many members of the Royal Naval Bird Watching Society), supplying the garrison at King Edward Point, and on tourist vessels (of which 8–10 currently visit South Georgia annually), principally visiting Grytviken in Cumberland Bay and the Bay of Isles. As a result, many more records of birds have been reported from South Georgia, including a number of species new to the Island. It seems timely, therefore, to produce a new annotated checklist, listing all species currently accepted by us as having occurred at South Georgia up to 31 December 1994.

The previous checklists explicitly restricted consideration to birds seen at South Georgia and over the waters of its continental shelf. However, now that the Government of South Georgia and the South Sandwich Islands has declared a Maritime Zone (SGMZ) around the islands out to approximately 200 nautical miles from South Georgia, it seems appropriate also to review the occurrence of species in this wider area. For this purpose, we have reviewed all records in Watson *et al.* (1971), Tickell & Woods (1972), Thurston (1982), the compilation by Tuck (1975) and all subsequent records summarised in *Sea Swallow*, the unpublished records of Dr R. R. Veit from seven research cruises between 1985/1986 and 1993/1994, the unpublished records of Dr W. R. P. Bourne and W. F. Curtis from numerous visits on board RFAs between 1982 and 1992, and the seabird-at-sea database of BAS, containing records from observers on BAS vessels (including routine logistic trips and scientific research cruises) since 1971/72.

We classify breeding species into seven categories, according to the size of their breeding population (Croxall *et al.* 1984, BAS unpublished data). These are: very rare (<10 pairs); rare (10–99); frequent (100–999); common (1000–9999); very common (10,000–99,999); abundant (100,000–999,999); very abundant (one million+). The main purpose of this paper, however, is to give details, especially for records since April 1982 (the closing date in the Prince & Croxall (1983) checklist), of the non-breeding visitors, migrants and vagrants, together



Figure 1. Map of South Georgia showing places mentioned in the text.

with an indication of their status in adjacent areas, especially the Falkland Islands and the Antarctic.

We divide non-breeding species into 4 categories: identification fully confirmed (A); identification probable but not confirmed beyond doubt (B); ship-assisted (C); introduced (D). The code is placed after the scientific name of the species. The identity of those providing unpublished records is indicated by initials, the full names being in the acknowledgements. A map of the general area (Fig. 2) shows the extent of the Maritime Zone around South Georgia, the extent of the continental shelf and the approximate position of the Antarctic Polar Front. Places mentioned in the text are shown in Figure 1.

**EMPEROR PENGUIN** *Aptenodytes forsteri* (A)

Vagrant. Seven previous records (Prince & Payne 1979, Prince & Croxall 1983). The eighth record was of an immature photographed at St Andrews Bay on 13 July 1985 (Clark 1986). To date all the records except one (of unknown age) are of immatures.

Immatures in moult occasionally visit Tierra del Fuego (Humphrey *et al.* 1970); there are three records for the Falkland Islands, two involving immatures (Woods 1988, Curtis 1994) and one record (of three immatures) at sea at 40°30'S, 54°34'W, not far south of the Subtropical Convergence (Rumboll & Jehl 1977). The species breeds at 38 localities around the Antarctic continent (Woehler 1993), the nearest to South Georgia being 2350 km distant.

**KING PENGUIN** *Aptenodytes patagonicus* (A)

Abundant, widespread breeder, whose population increase has averaged at least 5% per annum over the last 80 years (Croxall *et al.*

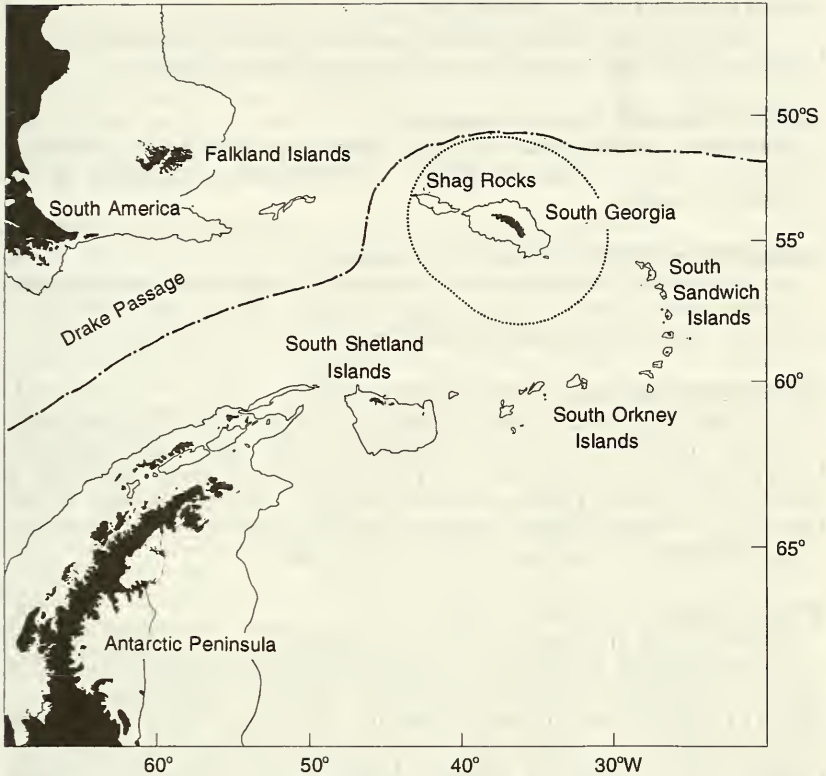


Figure 2. Map showing South Georgia in relation to South America and Antarctica together with the boundary of the South Georgia part of the South Georgia and South Sandwich Islands Maritime Zone, the 1000 m depth contours and the approximate position of the Antarctic Polar Frontal Zone.

1988). Recorded breeding for the first time at the South Sandwich Islands in 1995 (PH *in litt.*).

#### ADELIE PENGUIN *Pygoscelis adeliae*

(A)

Vagrant. Four previous records (Prince & Payne 1979, Prince & Croxall 1983), of three immatures and one adult. Four recent records: adult, Olsen Valley, Husvik, 10 October 1991 (KR); Husvik, 20 December 1991 (HMCA), possibly the same bird; Elsehul, November 1991 (PH); adult, Bird Island, 22 and 23 November 1992 (RB, ILB, KR). This total of only eight records is surprising in view of the species' abundance in the southern Scotia Sea, with some 200,000 breeding pairs at the South Orkney Islands, 850 km south of South Georgia. However there have apparently been annual sightings of birds from the Cooper Bay area in recent years (PH *in litt.*).

**CHINSTRAP PENGUIN** *Pygoscelis antarctica* (A)

Common but very local breeder, mainly around south-east South Georgia. Little current evidence of any population change.

**GENTOO PENGUIN** *Pygoscelis papua* (A)

Abundant, widespread breeder. Breeding population numbers fluctuate greatly (Croxall & Rothery 1995), but no evidence of any systematic trend.

**MACARONI PENGUIN** *Eudyptes chrysolophus* (A)

Very abundant, but fairly local, breeder with the main concentrations at north-west South Georgia. Some evidence of decrease in the mid 1970s but populations subsequently stable.

**ROCKHOPPER PENGUIN** *Eudyptes chrysocome* (A)

Very rare and local breeder (Prince & Payne 1979). In most years, moulting immatures are seen associated with the main Macaroni Penguin colony on Bird Island. It is not known if these are birds of South Georgia or Falkland Islands origin; the population in the Falklands, although much smaller than 50 years ago, still numbers some 500,000 breeding pairs (Woods in press).

**ROYAL PENGUIN** *Eudyptes schlegeli* (A)

Vagrant. The first record for South Georgia was of a bird captured and photographed at Bird Island on 28–29 February 1984 (PAP, RLS, BCO). In the field the bird appeared slightly larger (especially in height) than the surrounding Macaroni Penguins. The bill measurements (length 59.5, depth 25.8 mm) are diagnostic of a female Royal Penguin (see Marchant & Higgins 1990). This is important because, although pale-faced possible Macaroni Penguins have never been reported from South Georgia, they are known from the Prince Edward, Crozet and Heard Islands (Barré *et al.* 1974, Berruti 1981, Downes *et al.* 1959); such birds (which may be local mutations or possibly hybrids with Royal Penguins) obviously resemble Macaroni Penguins very closely. Another bird, unmeasured, noticeably larger than accompanying Macaroni Penguins and showing a completely pale face, was seen at Bird Island on 30 December 1992 (KR, NJC, NH, JMC).

This species is confirmed to breed only at Macquarie Island, 12,500 km from South Georgia. The only records for the Falklands are of three pairs apparently breeding at New Island (Strange 1992); however, without supporting details, the possibility of pale-faced morphs of the Macaroni Penguin cannot be ruled out.

**MAGELLANIC PENGUIN** *Spheniscus magellanicus* (A)

Vagrant. Three previous records (Prince & Payne 1979, Prince & Croxall 1982). Four additional records: two immatures over the shelf at 53°44'S, 36°58'W on 10 April 1972 (BP); an adult seen near a Macaroni Penguin colony on Bird Island on 13 February 1990 (MPH, SW); an undated record from Bird Island during the 1990/91 summer (JMC,

GL); one, of unknown age, at Olsen Valley, Husvik, on 13 March 1992 (OO). To date all records have occurred in the austral autumn.

This species breeds in large numbers in the Falkland Islands and on the Pacific and Atlantic coasts of southern South America; southern populations migrate north after breeding. It is often seen in the Drake Passage and has been recorded once at the South Shetland Islands (62°S), in January 1984 (Trivelpiece *et al.* 1987).

**WANDERING ALBATROSS** *Diomedea exulans chionopectera* (A)

Common, fairly widespread breeder, whose population has decreased steadily since the 1970s (Croxall 1979, Croxall *et al.* 1990).

**ROYAL ALBATROSS** *Diomedea epomophora epomophora* (A)

Vagrant. Six records, the first an adult at 53°39'S, 38°36'W on 22 December 1985 (RRV, MJW; seen twice more on the same day), the next an adult over the shelf at 53°40'S, 38°36'W on 28 December 1985 (RRV, MJW), followed by sightings of an immature at 53°44'S, 37°01'S on 7 February 1986 (RRV, MJW) and at 52°57'S, 42°11'W on 17 March 1986 (Bourne & Curtis 1986). Since the 1985/86 records, which were associated with an influx of warm surface water, there have only been two records, over the shelf at 54°23'S, 35°39'W on 11 February 1990 (MJW), and at 53°44'S, 38°15'W on 9 January 1994 (RRV). Although not easy to distinguish at sea from the Wandering Albatross, many experienced observers have failed to report it from South Georgia waters, so it is unlikely to be substantially overlooked.

The nominate subspecies frequently occurs around the Falkland Islands (Bourne & Curtis 1986, Woods 1988), especially over the continental shelf, and north to 23°S off Brazil. It breeds on the Auckland and Campbell Islands, New Zealand. The other subspecies *D. e. sanfordi*, which also breeds in New Zealand, at the Chatham Islands and on Taiaroa Head near Dunedin, also occurs frequently in Falkland waters, mainly off the north and east coasts (Curtis 1988, PH *in litt.*).

**BLACK-BROWED ALBATROSS** *Diomedea melanophris* (A)

Very common, fairly widespread breeder, whose population fluctuates considerably but has recently shown evidence of decline (Prince *et al.* 1994).

**GREY-HEADED ALBATROSS** *Diomedea chrysostoma* (A)

Very common, rather local breeder, mainly at northwest South Georgia. Its populations have decreased significantly since the 1980s (Prince *et al.* 1994).

**SHY ALBATROSS** *Diomedea cauta salvini* (A)

Vagrant. One previous record (Prince & Croxall 1983) of a bird captured and ringed in a Grey-headed Albatross colony at Bird Island on 28 February 1982. The following year a Shy Albatross was seen gliding over the same colony on 16 December 1983 (PAP, BCO). It is unknown if this was the same bird but it seems possible. On 13 March

1987, the bird that had been ringed at Bird Island in 1982 was recovered breeding on Penguin Island, Crozet Islands (6362 km from South Georgia), as a member of a newly-discovered colony of three pairs, being the first breeding records for the Crozet Islands (Jouventin 1990). Previously this subspecies was known to breed only at the Snares and Bounty Islands, New Zealand. It ranges east to the coasts of Peru, Chile and Argentina; records for South Africa are of uncertain status (Ross 1986).

There is one other record, of an albatross of the *D. cauta* group, seen in South Georgia waters at 52°06'S, 53°01'W on 26 January 1986 (MJW). Prince & Croxall (1983) noted that *D. c. cauta*, which is common (particularly juveniles) in South African waters (Ross 1986), may also occur in South Georgia waters, on the basis of an old specimen in Liverpool Museum (Bourne 1977). There are a few records of albatrosses belonging to the *D. cauta* group around the Falkland Islands (e.g. four birds in June–August 1984 (Bourne & Curtis 1985), five birds in March 1987 (Curtis 1988)).

**LIGHT-MANTLED SOOTY ALBATROSS** *Phoebastria palpebrata* (A)  
Common, widespread breeder.

**SOOTY ALBATROSS** *Phoebastria fusca* (A)

Vagrant. Only four confirmed records, since the adult bird observed at Elsehul in January 1977 and at Bird Island in February 1977 (Prince & Croxall 1983). One was seen at 53°44'S, 36°58'W on 10 April 1977 (BP), associated with an influx of seabird species typical of warmer waters. Subsequent records are at 53°12'S, 43°08'W on 24 January 1986; 54°33'S, 38°26'W on 4 February 1986; 54°05'S, 38°26'W on 13 February 1986 (all RRV, MJW, NMH). These records were associated with the presence of warm surface waters, bringing a number of species of seabirds, characteristic of cool temperate waters, south to the vicinity of South Georgia (Hunt *et al.* 1992). Other reports, e.g. of 21 off South Georgia, are, as Cheshire (1993) noted, almost certainly due to the misidentification of Light-mantled Sooty Albatrosses. However, Thurston (1982) reported single birds at 58°S, 15°W and 57°S, 26'W (the latter close to the northern South Sandwich Islands) in January 1963.

In the South Atlantic this species breeds at Tristan da Cunha and Gough Island and is not uncommon at sea north of 50°S.

**SOUTHERN GIANT PETREL** *Macronectes giganteus* (A)  
Common, widespread breeder; some evidence of recent population decrease.

**NORTHERN GIANT PETREL** *Macronectes halli* (A)  
Common, somewhat local breeder.

**ANTARCTIC FULMAR** *Fulmarus glacialisoides* (A)  
Regular visitor (Prince & Croxall 1983), mainly between October and December but seen from land or over the shelf in all months between

May and December. This species is a common breeder in the southern Scotia Sea, with its nearest breeding colonies at the northern South Sandwich Islands, some 650 km southwest of South Georgia. Part of the population migrates north in April–May to the South American coast.

**ANTARCTIC PETREL** *Thalassoica antarctica* (A)

Regular visitor. Recorded in most winters between June and August. The most unusual record is of two seen in front of the Hamburg Glacier on 26 December 1983 (L. Clifton in Bourne & Curtis 1985). The number appearing at South Georgia each winter appears to be influenced by the extent of pack ice in the Scotia Sea. From Bird Island it is usually seen in most winters in Stewart Straits but numbers rarely exceed ten observations per winter. The winter of 1987 was exceptionally cold and prolonged and the pack ice extended to South Georgia and was visible from Bird Island; between 30 July and 16 October, 48 Antarctic Petrels were observed from Bird Island by BAS biologists.

**CAPE PETREL** *Daption capense* (A)

Very common, fairly widespread breeder. Population increased in the 1970s and may still be expanding.

**SNOW PETREL** *Pagodroma nivea* (A)

Common, widespread breeder, mainly in mountains and at altitudes greater than 300 m (Croxall *et al.* in press).

**KERGUELEN PETREL** *Pterodroma brevirostris* (A)

Regular visitor to shelf waters (Prince & Croxall 1983), mainly between February and June. It was common (200 per day) over deep water off eastern South Georgia in June 1991 (RRV). This species is now generally accepted to be wide ranging in the Southern Ocean as far south as the pack ice and north to about 30°S (Lambert 1984). In the South Atlantic it breeds at Tristan da Cunha and Gough Island. Although several South Georgia records are of birds seen or caught close inshore, including one with the dawn dispersal of birds from the Willis Islands on 3 November 1983 (WRPB *in litt.*), extensive searches, especially in recent years, have provided no evidence that it breeds at South Georgia.

**ATLANTIC PETREL** *Pterodroma incerta* (A)

Vagrant. There are nine records involving 13 birds of which three records refer to six birds seen over the shelf. The first record we can trace was at 53°S, 43°W on 26 October 1976 (JPC); the nearest to mainland South Georgia were three birds at 53°44'S, 36°58'W on 10 April 1977 (BP) and a single bird at 53°16'S, 41°08'W on 19 March 1978 (PAP).

This species is rare at South Georgia, though apparently regular north of the Shag Rocks area (PH *in litt.*), but is frequently seen north

of 50°S. In the South Atlantic it breeds at Tristan da Cunha and Gough Islands.

**WHITE-HEADED PETREL** *Pterodroma lessonii* (A)

Vagrant. There are four records: the first was of one seen at 53°13'S, 35°36'W on 14 April 1980 (MJW, AC); the second of a bird captured onboard the *World Discoverer* while at anchor in Elsehul harbour on the night of 23 December 1983 (SP); the third was seen at 53°35'S, 39°50'W on 14 March 1984 (JJA) and the fourth at 54°18'S, 35°32'W on 20 February 1994 (RRV). There is also a record of one seen half-way between the South Orkney Islands and South Georgia in February 1976 (Kock & Reinsch 1978).

This species breeds on Kerguelen, Macquarie, Auckland and the Antipodes islands; in the South Atlantic it is typically seen in small numbers between 40° and 50°S.

**GREAT-WINGED PETREL** *Pterodroma macroptera* (A)

Vagrant. There are three records. The first was on the shelf at 53°44'S, 36°18'W on 10 April 1977 (BP); the second, also over the shelf, at 53°10'S, 43°50'W on 22 February 1980 (MJW); the third at 51°21'S, 37°11'W on 22 March 1985 (MJW). There are two tentative records, just outside the SGMZ, in February and mid-March 1989 (Cheshire 1990).

In the South Atlantic the species breeds at Tristan da Cunha and Gough Island.

**SOFT-PLUMAGED PETREL** *Pterodroma mollis* (A)

Regular visitor. This species is often recorded at South Georgia. In the BAS database there are 391 records within the SGMZ involving 848 birds, of which 292 were seen over the shelf. There was a noticeable influx, associated with southerly movement of warm water masses, in early 1986 (Hunt *et al.* 1992). In the South Atlantic this species, which breeds at Tristan da Cunha and Gough Island, is widespread and abundant, particularly in the Drake Passage in the austral autumn.

**ANTARCTIC PRION** *Pachyptila desolata* (A)

Very abundant, widespread breeding species.

**FAIRY PRION** *Pachyptila turtur* (A)

Common, but very local, breeder (Prince & Copestake 1990). Seen more commonly at sea in winter than summer (RRV *in litt.*).

**BROAD-BILLED PRION** *Pachyptila vittata* (A)

Vagrant. One previous record of a bird seen near the entrance of Cumberland Bay, on 24 November 1982 (Prince & Croxall 1983). On 14 March 1986 two birds were captured at night in Stromness Bay, having been attracted by ships' lights (Bourne & Curtis 1986), and one bird came on board RRS *James Clark Ross* on 10 January 1994 at 53°42'S, 38°20'S and was measured and photographed (RRV).



This species is rare at South Georgia but may well occur more frequently at the northern edge of the SGMZ than the records so far suggest. In the South Atlantic the species breeds at Tristan da Cunha and Gough Island.

**THIN-BILLED PRION** *Pachyptila belcheri* (A)

Regular visitor. This species is probably under-recorded owing to the similarity in plumage with Antarctic Prion. In addition to the five previous land- and ship-based records (Prince & Payne 1979, Prince & Croxall 1983), there are a further 16 birds recorded from an RFA vessel on various dates between 13 March and 2 May 1986 in the Cumberland Bay area (Bourne & Curtis 1986). At sea the BAS database holds 347 observations of 1892 birds within the SGMZ, of which 178 observations of 1465 birds refer to birds seen over the shelf. Most of these records are to the west of South Georgia in the direction of the Falkland Islands where the species is an abundant breeder.

**BLUE PETREL** *Halobaena caerulea* (A)

Very common, fairly widespread breeder. Some populations (e.g. at Bird Island) have decreased recently due to destruction of part of their tussock grassland breeding habitat by Antarctic Fur Seals *Arctocephalus gazella*.

**WHITE-CHINNED PETREL** *Procellaria aequinoctialis* (A)

Very abundant, widespread breeder.

**GREY PETREL** *Procellaria cinerea* (A)

Occasional visitor. Recorded in the SGMZ at least as early as February 1963 (Thurston 1982). First recorded over the shelf at 53°44'S, 36°58'W on 10 April 1977 (BP). In the BAS database there are 80 observations of 160 birds within the SGMZ, of which 59 have been seen over the shelf. The most inshore were those reported by Bourne & Curtis (1986) between Leith and Grytviken.

In the South Atlantic this species breeds at Tristan da Cunha and Gough Island.

**GREAT SHEARWATER** *Puffinus gravis* (A)

Regular visitor to shelf waters (Prince & Croxall 1983), mainly between November and April. This species is most frequently seen to the west of mainland South Georgia in the vicinity of Shag Rocks. A massive influx occurred in early 1986, associated with southerly movement of warm water masses towards South Georgia (Hunt *et al.* 1992).

Breeds in large numbers at Tristan da Cunha and Gough Island. Small numbers breed in the Falkland Islands (Woods 1988).

**SOOTY SHEARWATER** *Puffinus griseus* (A)

Occasional visitor. There are 48 observations involving 87 birds within the SGMZ; 19 of these observations refer to 39 birds seen over the shelf. The first record over the shelf was at 53°S, 42°W on 26

October 1976 (GT). Since then the species has been seen close to Bird Island and Leith but is mainly seen to the west of South Georgia near Shag Rocks.

In the South Atlantic this species breeds on the Falkland Islands and southern South America. It is frequently seen in the Drake Passage and has been recorded as far south as 58°S in the South Atlantic (Kock & Reinsch 1978, Thurston 1982).

**LITTLE SHEARWATER** *Puffinus assimilis* (A)

Vagrant. There are only two records definitely within the SGMZ, both over the shelf. The first was at 53°49'S, 40°02'W on 20 March 1985 (MJW), the second at 53°38'S, 39°40'W on 11 February 1986 (RRV, MJW). The species is more frequently seen to the northwest of South Georgia just north of the Antarctic Polar Front and also regularly (up to 8 birds per day) recorded north of Shag Rocks (PH *in litt.*).

In the South Atlantic this species breeds at Tristan da Cunha and Gough Island.

**WILSON'S STORM-PETREL** *Oceanites oceanicus* (A)

Abundant, widespread breeder.

**BLACK-BELLIED STORM-PETREL** *Fregetta tropica* (A)

Common, but rather local, breeder, whose population may have been underestimated in the past.

**WHITE-BELLIED STORM-PETREL** *Fregetta grallaria* (B)

Vagrant. Eakin *et al.* (1986) recorded a probable, but unconfirmed, individual with a group of Black-bellied Storm-petrels at 52°21'S, 40°06'W on 10 May 1975. We know of no other sightings of the species within the SGMZ, the nearest convincing records being at 50°40'S, 50°01'W (Kock & Reinsch 1978).

**GREY-BACKED STORM-PETREL** *Garrodia nereis* (A)

Rare breeder. Although there are no confirmed breeding records since 1972 (Prince & Payne 1979), birds have been seen making display flights over suitable habitat on several occasions.

**SOUTH GEORGIA DIVING-PETREL** *Pelecanoides georgicus* (A)

Very abundant breeder.

**COMMON (SUBANTARCTIC) DIVING-PETREL** *Pelecanoides (urinatrix) exsul* (A)

Very abundant breeder.

**SOUTH GEORGIA (BLUE-EYED, IMPERIAL) SHAG** *Phalacrocorax georgianus* (A)

Common, widespread breeder. We follow Siegel-Causey (1988) and Siegel-Causey & Lefevre (1989) in the recognition of species limits in this group of taxa, formerly treated as subspecies of *P. atriceps*. However, given that taxa are distinguished currently solely on

osteological and/or morphometric characters there is a particular need for fieldwork to confirm the existence and elucidate the nature of species-isolating mechanisms. The distribution of *P. georgianus* is also uncertain. Marchant & Higgins (1990) indicate that it occurs at the South Orkney Islands (with Antarctic Shag *P. bransfieldensis* occurring east to the South Shetland Islands), but the basis for this is not stated. As the identity of the shags at the South Sandwich Islands is unknown, it may be best at present to regard *P. georgianus* as confined to South Georgia. A critical study of the relationships between (and status of) *P. bransfieldensis* and *P. georgianus* on the islands of the Scotia Arc as well as between *P. bransfieldensis* and *P. atriceps* in southern South America (Clark *et al.* 1992) is needed.

#### GREAT EGRET *Casmerodius albus* (A)

Vagrant. Four previous records (Prince & Payne 1979, Prince & Croxall 1983). A fifth record, of a bird with a flock of nine Cattle Egrets *Bubulcus ibis*, was at Bird Island on 19 April 1986 (CD). This cosmopolitan species is widespread in South America, breeding south to 47°S in Argentina. It is an irregular visitor to the Falkland Islands, with at least nine records (Woods 1988).

#### SNOWY EGRET *Egretta thula* (A)

Vagrant. Two previous records (Prince & Croxall 1983). One additional record of a single bird seen on 4 April 1980 at Bird Island (JPC). Widespread breeding species in South America, south to about 40°S; four records of vagrants to the Falkland Islands (Woods 1988, Gregory 1994).

#### CATTLE EGRET *Bubulcus ibis* (A)

Regular visitor. Since the first record for South Georgia in 1977 (Prince & Croxall 1983), a total of 191 birds has been recorded at South Georgia. Figure 3 shows the distribution of records: 1979, 1985 and 1986 were years of major invasions; 1978, 1980, 1988 and 1989 were the only years in which it has not been recorded. These data do not include 26 birds which came aboard RV *Nathaniel Palmer* half way between the Falkland Islands and South Georgia and disembarked at Stromness in May 1993 (RRV *in litt.*). In all years occurrences have been between March and June.

This species is widespread throughout the American continent. It was first recorded in the Falkland Islands in 1976 (Strange 1979), since when it has occurred annually, often in large numbers, exceeding 3000 birds in April 1986 (Woods 1988). It has occurred, with increasing frequency, at other subantarctic islands (e.g. Prince Edward and Crozet Islands (Newton *et al.* 1983, Stahl *et al.* 1984) and at the South Orkney (Rootes 1988) and South Shetland (Kaiser & Peter 1988, Torres *et al.* 1986, Trivelpiece *et al.* 1987) Islands since the first records in 1981 and 1984 respectively. There is an unpublished record from 61°30'S, 27°52'W, 100 nautical miles south of the southernmost island of the South Sandwich Islands, on 13 April 1982 (HO'G). The most

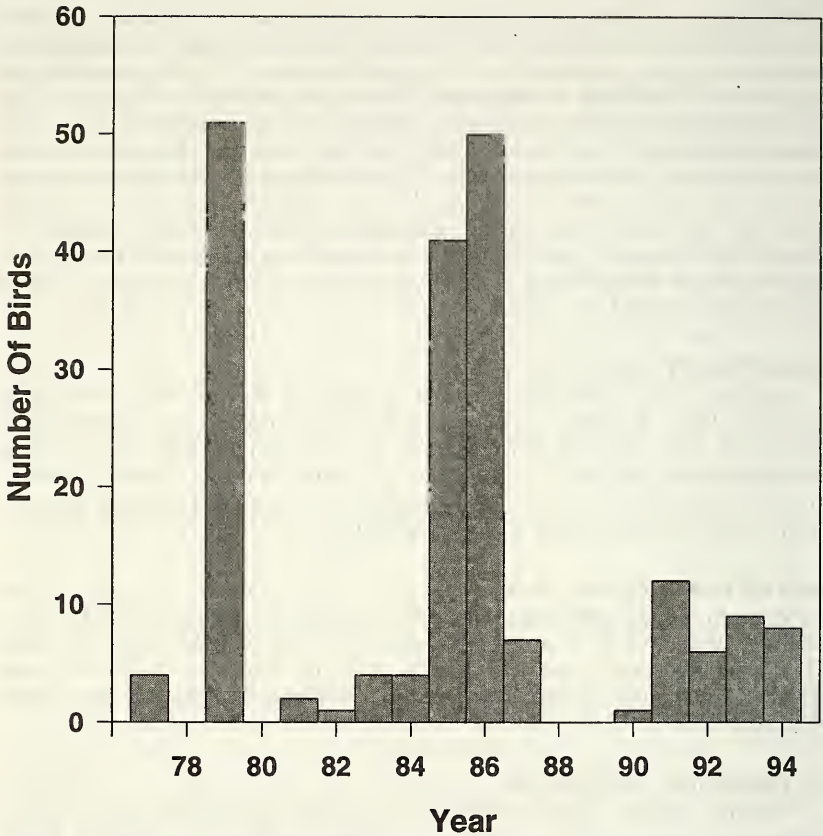


Figure 3. Numbers of Cattle Egrets recorded at Bird Island between 1977 (i.e. austral summer of 1977/78) and 1994 (i.e. 1994/95).

southerly record known to us is from Argentine Islands ( $65^{\circ}15'S$ ,  $64^{\circ}16'W$ ) in December 1979 (AS).

**UPLAND GOOSE** *Chloephaga picta* (D)

Introduced to South Georgia from the Falkland Islands in 1911 and extirpated by 1950. A subsequent introduction in 1958 did not succeed (Prince & Payne 1979).

**SOUTH GEORGIA (YELLOW-BILLED) PINTAIL** *Anas georgica georgica* (A)

Common widespread breeder. This subspecies is endemic to South Georgia.

There are two records of the South American subspecies *A. g. spinicauda* which breeds in the Falklands (locally) and throughout Argentina, Chile and north to Bolivia and southeastern Brazil. The first

record was on 15 December 1979 at Bird Island (IH, JPC), the second of one seen and photographed in company with *A. g. georgica* at Grytviken on 10 December 1994 (KR).

There are at least eight records of *A. georgica* on the Antarctic Peninsula, South Shetland and South Orkney Islands (Cordier *et al.* 1983, Rootes 1988).

**YELLOW-BILLED (SPECKLED) TEAL** *Anas flavirostris* (A)

Rare, with a small breeding population in the Cumberland Bay area. In addition there are six reports from Bird Island involving a minimum of 12 birds. In 1979 two were present on 11 February; by 7 March this had increased to six and three were last seen on 26 March (IH, BB, GT). Subsequent records are: one from 28 February to 5 March 1984 (TSMcC, PAP); one on 31 May 1985 (RLS); two on 23–24 March 1986 (RLS); one from 2 May to 14 August 1988 (SR, MRRJ); one on 5 July 1989 (MRRJ). It is not known whether these birds are from the Cumberland Bay population or represent immigration from the Falkland Islands, where the species is common and widespread.

**CHILOE WIGEON** *Anas sibilatrix* (A)

Vagrant. Five previous records (Prince & Payne 1979, Prince & Croxall 1983). One additional record of a male, seen and photographed at Bird Island on 7 March 1985 (RLS, CD).

This species is widespread in South America and a local breeder in the Falkland Islands. There are records of at least 13 birds in the South Shetland and South Orkney Islands (Beck 1968, Maxson & Bernstein 1980, Rootes 1988, Trivelpiece *et al.* 1987).

**BLUE-WINGED TEAL** *Anas discors* (A)

Vagrant. Only one record, of a drake collected on 20 June 1972 in Cumberland Bay (Prince & Payne 1979). This species breeds in North America, wintering in central America and northern South America, occasionally south to about 30°S in Argentina. There are apparently no records for the Falkland Islands (Woods 1988).

**TURKEY VULTURE** *Cathartes aura* (A)

Vagrant. The first record for South Georgia was one soaring over Grytviken whaling station on 14 September 1991 (KR). On 24 September 1992, a bird was again seen (and photographed) at Husvik (OO). Further sightings at Husvik followed on 9 October 1992 and towards the end of that month (OO). At Bird Island, sightings of single birds were made on 6 October (IMcC) and 6 December 1992 (MR, BCO). During this period a BBC film crew reported seeing this species at the Bay of Isles and St Andrews Bay. From the photograph the bird seen at Husvik was an adult (with a bright red head). There were no further sightings after 6 December during the austral summer of 1992/93 and none during the summer of 1993/94. In the summer of 1994/95 an adult was seen at Bird Island throughout 22 November 1994 (KR). Thus Turkey Vultures have been seen in three out of the last four years and always between September and December. Even if

the various sightings in 1992 refer to the same bird, there are three confirmed records. It is unlikely that as large and mobile a species as the Turkey Vulture could go undetected for the lengthy intervals between the observations in different years, suggesting that three separate events were involved.

This is the first record of a South American vulture in Antarctica. In order to reach South Georgia from its nearest breeding locality in the Falkland Islands it would have had to cross 1000 km of ocean. Unlike many vagrants that probably perish eventually, this species could probably survive on the abundant food supply available year-round on South Georgia. Even in the winter, dead chicks from the large King Penguin colonies and Reindeer *Rangifer tarandus* carcasses would provide an adequate food supply until Southern Elephant Seals *Mirounga leonina* start breeding in September.

In the Falkland Islands it is a common resident (Woods 1988), frequently associated with seabird and seal colonies. With reduced persecution, its numbers have increased in recent years, which may have encouraged range expansion.

**PEREGRINE FALCON** *Falco peregrinus* (A)

Vagrant. The first record for South Georgia was of one which came on board ship at 52°33'S, 46°W, 120 nautical miles west of Shag Rocks, on 29 April 1986 and flew ashore the next day at South Georgia (Bourne & Curtis 1986). The second record was at Bird Island on 7 August 1991 when one was seen chasing a Kelp Gull *Larus dominicanus* (JMC, GL, JA).

In the Falkland Islands this species frequently preys upon prions and small petrels. It has been recorded 60 km offshore, using ships as feeding stations (Woods 1988). Given the increased movement of shipping between the Falklands and South Georgia and the migratory behaviour of this species, more sightings may occur in the future.

**PURPLE GALLINULE** *Porphyryla martinica* (A)

Vagrant. One previous record, of an immature male that flew into a window at Grytviken, Cumberland Bay, in 1943 (Pereyra 1994, Prince & Payne 1979). The second record is of a bird that was killed after flying on board the RV *Walter Herwig* at 53°30'S, 38°00'W, about 55 km north of Bird Island, on 4 April 1978 (KHK). The specimen is now in the Hamburg Museum.

This species has a wide distribution from the southeastern United States southwards to southern Chile and 35°S in Argentina (Meyer de Schauensee 1971). It has been recorded three times in the Falkland Islands (Woods 1988) and also at Tristan da Cunha (frequent), Ascension and St Helena (Urban *et al.* 1986).

**ALLEN'S GALLINULE** *Porphyryla alleni* (A)

Vagrant. The only record for South Georgia is of a fairly long-dead corpse, found at Royal Bay in December 1984 (BB) and deposited in the British Museum. Although its plumage characteristics are inadequate for certain identification, the wing measurement (159 mm)

is diagnostic of this species (range 141–164 mm; Blake 1977), being outside the range of the larger *P. martinica* (172–191 mm; Urban *et al.* 1986) and the smaller Azure Gallinule *P. flavirostris* (119–139 mm; Blake 1977). The bill length (24.5 mm) is also consistent with *P. alleni* (22–25 mm), rather than *P. martinica* (25–31 mm).

The species is widespread in the African tropics where it is migratory and prone to irruptions. In addition to a number of records in Europe it has strayed to St Helena and Ascension Island (Urban *et al.* 1986).

#### **SOLITARY SANDPIPER** *Tringa solitaria* (A)

Vagrant. There are no additions to the two records, both from Bird Island, on 11 November 1975 and 8–9 November 1981 (Prince & Payne 1979, Prince & Croxall 1983). This species breeds in Alaska and Canada, wintering in western Peru, Bolivia and Argentina (Meyer de Schauensee 1971). It has not been recorded in the Falkland Islands.

#### **LITTLE STINT** *Calidris minuta* (A)

Vagrant. One record, of a specimen collected at Bird Island on 28 December 1977. Originally described as a probable first year immature (Prince & Croxall 1983), it has subsequently been identified as an adult female (Marchant *et al.* 1986); the specimen is now lodged in the British Museum.

This is still the only confirmed record for South America of a species which is a rare vagrant to North America. It breeds in north-central Siberia and winters mainly in India and Africa.

#### **WHITE-RUMPED SANDPIPER** *Calidris fuscicollis* (A)

Regular but rare visitor. Seven previous records (Prince & Payne 1979, Prince & Croxall 1983). Subsequently there are ten reports of eleven individuals. All records in spring are between October and December and from Bird Island: 21 November 1982 (PAP, PGC); 26–31 October 1984 (MO'C); 26–28 October 1985 (MO'C); 8 November 1985 (MO'C, CD), possibly the same bird as in the previous record; 12 November 1988 (SR *et al.*); 15 December 1988 (ILB, SR); 26 December 1989 (PAP, SR, MRRJ); 9 November 1991 (JMC, GML, JA); 16–25 October 1993 (JMC, KR, AGW, NH). The only autumn record is of two birds seen together on 14–15 March 1986 on Tonsberg Point (Bourne & Curtis 1986).

This species is the commonest wader visiting South Georgia. It is also a very common non-breeding visitor to the Falkland Islands (where flocks sometimes number more than a hundred birds) from the arctic coasts of North America where it breeds (Woods 1988). There are at least five separate records for the South Shetland Islands, including a group of 25 from October 1985 to February 1986 (Trivelpiece *et al.* 1987).

#### **PECTORAL SANDPIPER** *Calidris melanotos* (A)

Vagrant. Two previous records (Prince & Payne 1979, Prince & Croxall 1983). Four additional records, all from Bird Island. An adult female on 1 January 1982 (PGC), a first-winter female on 12 November

1982 (PAP) and a male on 11 June 1983 (PGC) were all collected. The last record was on 20 October 1988 (SR, TDW, MRRJ).

This species breeds in arctic North America and Siberia. It winters in South America as far south as 50°S in Argentina. There are four records for the Falkland Islands (Woods 1988) and one from the Antarctic, at Rothera Point (67°34'S, 68°08'W) on 5–9 January 1978 (TWS).

**BAIRD'S SANDPIPER** *Calidris bairdii* (A)

Vagrant. The first confirmed record for South Georgia was of a bird seen and photographed at Bird Island from 26 October to 2 November 1994 (KR). The photograph shows clearly the diagnostic characters, including the long wings projecting beyond the tail, the short legs and the bill, completely black with no yellow at the base. In the field the absence of a white rump and the distinctive call were noted.

This species probably occurs annually in small numbers in the Falkland Islands (Gregory 1994). It breeds in arctic North America and winters in South America as far south as Tierra del Fuego. There is one record for the South Orkney Islands (Rootes 1988).

**WILSON'S PHALAROPE** *Phalaropus tricolor* (A)

Vagrant. The first record for South Georgia was of a single bird in winter plumage observed and photographed from a distance of 3 m at Bird Island on 13 October 1983 (PGC, BCO, RLS).

The species breeds in North America and migrates to South America wintering in Uruguay, Argentina and central Chile. According to Woods (1988), a few birds reach the Magellanic region and there has been one record for northwest Tierra del Fuego (Humphrey *et al.* 1970). It has been recorded at least twice in the Falkland Islands (Woods 1988), once at Signy Island, South Orkney Islands in March 1982 (Rootes 1988) and once at Alexander Island, Antarctica, in October 1968 (Conroy 1971).

**YELLOW-BILLED (GREATER, SNOWY, AMERICAN) SHEATHBILL** *Chionis alba* (A)

Common and widespread breeder, invariably in association with seabird and seal colonies.

**BROWN (SUBANTARCTIC) SKUA** *Catharacta loennbergi* (A)

Common and widespread breeder; population possibly still increasing in some areas (see Prince & Croxall 1983).

**SOUTH POLAR (MACCORMICK'S) SKUA** *Catharacta maccormicki* (A)

Rare but regular migrant. There are sixteen records of nineteen birds. The first ten records, between 13 December 1979 and 19 January 1988, were all sighted at sea, as was a bird at 53°42'S, 38°20'W on 10 January 1994 (RRV). Eight were over the shelf. There are five land-based records, all at Bird Island: 5 April 1988 a dark phase bird (SR *et al.*); 21 March 1989 one, dark phase (SR); 4 February 1990 two, one of the intermediate phase and the other paler (GML, JMC *et al.*);



4 January 1994 a first-year dark phase bird, caught and ringed (PAP, KR *et al.*); 23 March 1994 another dark phase bird (NH, KR).

At South Georgia this species is probably a regular but scarce passage migrant. It has a circumpolar breeding distribution on the Antarctic continent (including the Antarctic Peninsula north to the South Orkney Islands) and migrates northwards into the Atlantic and Pacific Oceans. It is a rare but probably regular migrant to the Falkland Islands (Woods 1988, Gregory 1994).

**LONG-TAILED SKUA** *Stercorarius longicaudus* (A)

The first record for South Georgia was of an adult bird in fresh plumage seen and photographed near Grytviken in Cumberland Bay, on 15 January 1984 (Naveen 1989).

This species breeds in arctic regions of the Northern Hemisphere. It winters in the Atlantic and Pacific Oceans south to 55°S and has been recorded occasionally in winter around the Falkland Islands (Curtis 1988) and east to 45°36'S, 53°30'W (MJW), not infrequently in the Falklands Current and at sea between South Georgia and Brazil (Veit 1985).

**KELP GULL** *Larus dominicanus* (A)

Frequent-to-common and widespread breeder.

**DOLPHIN GULL** *Larus scoresbii* (A)

There are two records of at least four individuals of this gull at South Georgia. The first was seen flying around RFA *Olna* about 8 km off Cumberland Bay on 11 April 1985 (Bourne & Curtis 1985). The second occurred at Grytviken on 21 February 1986 and three were seen there on 12 March 1986 (Bourne & Curtis 1986). It is not known if the one seen on 21 February was one of the three seen on 12 March but it seems likely.

This species has a restricted breeding distribution in southern South America and the Falkland Islands, where it is resident (Woods 1988).

**[OLROG'S GULL** *Larus atlanticus*

The occurrence of this species at South Georgia was based on one record of an immature collected there in January 1949 (Olrog in Watson 1975, Prince & Payne 1979, Prince & Croxall 1983). However, Escalante (1984) has re-identified the specimen as a Kelp Gull, so the species must be deleted from the South Georgia list.]

**BROWN-HOODED GULL** *Larus maculipennis* (B)

Vagrant. On 21 May 1987 a small gull at Bird Island was identified as belonging to this species. A full description and assessment was published (Delany *et al.* 1988). In the Falkland Islands this species is a locally common resident breeder (Woods 1988). It is widely distributed in southern South America.

Bourne (1988), however, suggested that the Delany *et al.* (1988) description was unacceptable for Brown-hooded Gull but could apply to a subadult Franklin's Gull *L. pipixcan*. He noted that this is a

mobile, migratory marine species and thus more likely to occur at South Georgia than a terrestrial and marshland species like the Brown-hooded Gull. In fact, the latter species feeds predominantly in nearshore marine habitats, such as kelp beds, and its populations in southern South America migrate northwards (as far as Brazil) in winter. Nevertheless, Bourne's (1988) view might be supported by records of Franklin's Gull from the Falkland Islands (one in 1986; Woods 1988) and Signy Island, South Orkney Islands (one adult in breeding plumage, seen and photographed 14–20 April 1990; RC) and in the Drake Passage 160 km from the South Shetland Islands in January 1992 (PH *in litt.*).

**ANTARCTIC (SOUTH GEORGIA) TERN** *Sterna (vittata) georgiae* (A)

Common and fairly widespread breeder. As Murphy (1936) noted, the small size of South Georgia birds supports their recognition as a distinct subspecies, *S. v. georgiae*. Examination (by PAP) of a much larger series confirms the distinctiveness of the taxon. Any review of the status of terns inhabiting subantarctic islands should include re-evaluation of the taxonomic rank of the South Georgia population. The population may have decreased (or simply relocated) as favoured coastal breeding sites have been taken over by Antarctic Fur Seals.

**ARCTIC TERN** *Sterna paradisaea* (A)

Rare migrant. Two previous inshore records, in early March 1976 in Cumberland East Bay (Kock & Reinsch 1978) and on 7 April 1977, when three specimens were collected in Stromness Bay from RV *Hero* (Jehl *et al.* 1978). The third inshore occurrence was of a single bird in winter plumage, again in Stromness Bay, on 20 November 1986 (TSMcC *et al.*). There are no confirmed records of this species at sea within the SGMZ, although there are many from south of 60°S and a few between 40 and 45°S.

This species probably occurs at South Georgia more frequently than the few records suggest. It breeds in the arctic and temperate Northern Hemisphere and winters in pack ice areas in Antarctica.

**EARED DOVE** *Zenaida auriculata* (C)

Vagrant. The only record for South Georgia relates to ship-assisted passage. It was observed on board RFA *Grey Rover* 270 nautical miles east of the Falkland Islands on 1 April 1992 and remained on board until 3 April when the vessel was approximately 10 nautical miles north of the Bay of Isles, South Georgia (Curtis 1994).

The species is very common over much of southern South America and occurs irregularly in the Falkland Islands (Woods 1988, Gregory 1994).

**SOUTH GEORGIA PIPIT** *Anthus antarcticus* (A)

Common. Endemic widespread breeder confined to areas free of Brown Rats *Rattus norvegicus* on offshore islands and parts of the south coast.

**EASTERN KINGBIRD** *Tyrannus tyrannus* (A)

Vagrant. The only record is still that of a bird collected at Grytviken, Cumberland Bay, on 11 November 1973 (Prince & Payne 1979). This species is widespread in North America, wintering in South America south to central Argentina (Ridgely & Tudor 1994). There is one record for the Falkland Islands (Woods 1988).

**DARK-FACED GROUND-TYRANT** *Muscisaxicola macloviana* (A)

Vagrant. The first record for South Georgia was of a single bird seen daily (and photographed) on Bird Island from 23 to 29 September 1994 (KR, JMC).

There are two described subspecies. *M. m. macloviana* is generally regarded as being resident in the Falkland Islands (Woods 1988); *M. m. mentalis* breeds in southern Chile and Argentina and is at least a partial migrant to and from northern Argentina (Ridgely & Tudor 1994). The latter is perhaps the more likely race to occur at South Georgia.

**CHILEAN SWALLOW** *Tachycineta leucopyga* (B)

Vagrant. Previously reported in error as a European House Martin *Delichon urbica* (Prince & Croxall 1983). Two birds were seen at Schlieper Bay on 4 April 1982 by P. Martin. At the time of the sighting, PAP, who was at Bird Island, provisionally identified the birds as Chilean Swallows. Subsequently in correspondence (7/9/82), P. Martin identified the species as House Martin, principally on the basis of not being able to see the narrow white apical edge to the innermost remiges that is one characteristic of Chilean Swallow. However, the views obtained and the description provided were fairly brief. In view of the fact that the Chilean Swallow is a regular, if scarce, migrant to the Falkland Islands (Gregory 1994), and has been recorded from 67°17'S, 50°30'W, 160 nautical miles southeast of Elephant Island, South Shetland Islands, on 13 February 1985 (MDRK; specimen deposited in Cambridge University Museum), we feel that the original identification was the correct one.

The Chilean Swallow is a regular migrant to the Falkland Islands, where it has bred once; elsewhere it breeds in Chile and Argentina, the southernmost populations being migratory (Woods 1988).

**BARN SWALLOW** *Hirundo rustica* (A)

Vagrant. There are no further records to add to the five previously published (Payne & Prince 1979, Prince & Croxall 1983). All these records were thought to refer to the race *H. r. erythrogaster* which breeds in North America and winters in the tropical and temperate zones of South America. This species has also been recently found breeding in the Buenos Aires province in Argentina (F. Vuilleumier *in litt.*). It frequently occurs in the Falkland Islands, especially in October and November, the same time as all the records from South Georgia.

**LONG-TAILED MEADOWLARK** *Sturnella loyca* (A)

Vagrant. The first record for South Georgia was one seen on 9 April 1987 at Prince Olav Harbour by Curtis (1988) who adjudged it unlikely

to have received an assisted passage. The species breeds fairly commonly throughout Chile and Argentina (the southern populations being resident) and is a common resident in the Falkland Islands (Woods 1988).

#### HOUSE SPARROW *Passer domesticus*

(C)

Vagrant. One bird arrived in the late 1950s aboard a whaling vessel from South America and died soon afterwards (Watson 1975, Prince & Payne 1979).

The South Georgia list now stands at 79 species (including 1 introduction, 2 ship-assisted species and 3 needing definite confirmation), of which 30 are breeding species. The recent development of records of South Georgia birds is of some interest. By 1970, the list was of 38 species (including 1 introduction and 1 assisted-passage species), 27 recorded as breeding (Watson *et al.* 1971, Watson 1975). In the next seven years (Prince & Payne 1979) the total was raised to 50 species, adding two new breeding species (Rockhopper Penguin, Blue Petrel) and 10 new vagrants (4 seabirds, 2 waterbirds, 2 waders and 2 landbirds). The next five years (Prince & Croxall 1983) saw 11 further species added (total 61 species), one as a breeding species (Fairy Prion), the rest as vagrants (6 seabirds, 2 waterbirds, 1 wader, 1 landbird). In the last 12 years the list has risen to 78 species (including one more assisted-passage species), essentially double the 1970 list. No new breeding species have been recorded but 17 new visitors or vagrants (9 seabirds, 1 waterbird, 2 waders, 5 landbirds) were added. However, several seabird species have only, or only commonly been seen in years when abnormally warm surface water was present near South Georgia, as in 1986 and 1990. Increasing the area of consideration, from the continental shelf to that of the South Georgia Maritime Zone, adds only one seabird species (White-bellied Storm-petrel), bringing the overall total to 79 species. It should be noted, however, that the shelf extends past Shag Rocks nearly to the position of the Antarctic Polar Front, thereby providing favourable circumstances for recording a wide variety of seabird species.

The most likely potentially new seabird species for the South Georgia area must include Manx Shearwater *Puffinus puffinus* (2 and 5 birds in 1991 and 1993 respectively in the area north of Shag Rocks (PH *in litt.*), but without precise location and therefore not definitively within the SGMZ), Arctic Skua *Stercorarius parasiticus* (records from Signy Island, South Orkney Islands (61°S) in 1951 and 1980 (Rootes 1988)) and Pomarine Skua *S. pomarinus* (at least 5 records for the Antarctic Peninsula and South Shetland Islands (Watson 1975, Bannasch 1984)). One possible new waterbird might be Black-necked Swan *Cygnus melanocoryphus* which has reached the South Shetland Islands (at least 10 individuals in January 1989) and 65°S on the Antarctic Peninsula (summer 1916/17, February 1989 and December 1994 to January 1995; Bennett 1922, Lazo & Yanez 1989, Orgeira & Fogliatto 1991, S. Cuthbertson *in litt.*). Additional wader species might include Grey Phalarope *Phalaropus fulicarius* (one on the Antarctic

Peninsula (Watson 1975), two at Signy Island in 1977 and 1982 (Rootes 1988), Upland Sandpiper *Bartramia longicauda* (one at Deception Island in 1923, a probable at Signy Island in 1962–63 (Watson 1975) and one at 40°35'S, 39°34'S, 1500 km north of South Georgia on 18 October 1980 (PAP, MIJW)) and Least Sandpiper *Calidris minutilla* (one at Signy Island in 1981/82; Rootes 1988). New landbirds are particularly hard to predict. Possible species might be White-crested Elaenia *Elaenia albiceps* (two records from the Falkland Islands (Woods 1988) and one from midway between Tierra del Fuego and the South Shetland Islands at 57°05'S, 59°25'E (Nores & Yzurieta 1981)), Magellanic Snipe *Gallinago paraguaiiae* (one at Signy Island on 19 and 20 March 1988 (JA, JP)), Rufous-chested Dotterel *Charadrius modestus* and Correndera Pipit *Anthus correndera*, both seen at sea to the east of the Falkland Islands in spring (WRPB *in litt.*).

The total number of breeding birds species at South Georgia is fairly typical of that for similar sub-antarctic islands, being slightly fewer than at Kerguelen and Crozet Islands (Jouventin *et al.* 1984, Weimerskirch *et al.* 1988) and slightly more than at Marion, Prince Edward (Burger *et al.* 1980) and Macquarie (Rounsevell & Brothers 1984) Islands. However, South Georgia has more vagrants recorded than any other sub-antarctic island, probably reflecting its proximity to species-rich South American source areas and its location in the path of the prevailing westerly winds. In contrast, the other sub-antarctic islands are mainly to the south of continental landmasses and not similarly in the path of prevailing winds.

### Acknowledgements

For providing details of previously unpublished records we thank J.-J. Argoud, J. Arnould, J. Ashford, R. Bevan, J. H. R. Boswall, I. L. Boyd, B. Brown, A. Clarke, N. J. Cobby, R. Coggan, P. G. Copestake, J. M. Cooper, C. Duck, N. Forsyth, M. P. Harris, P. Harrison, N. Huin, I. Hunter, M. R. R. Jones, M. D. R. Kelly, K.-H. Kock, R. Lidstone-Scott, G. Liddle, H. McAlister, T. S. McCann, I. McCarthy, M. O'Connell, H. O'Gorman, O. Olsson, B. C. Osborne, B. Pearson, J. Picken, S. da Prato, M. Richards, S. Rodwell, T. W. Salmon, A. Saunders, G. Thomas, S. Wanless, T. D. Williams, A. G. Wood. For making available extensive data on seabirds at sea we thank especially W. R. P. Bourne, W. F. Curtis, N. M. Harrison, R. R. Veit, M. J. Whitehouse, the many members of BAS who completed record cards since 1971 and A. G. Wood for maintaining the database. Mary LeCroy provided invaluable assistance in examining specimens at the American Museum of Natural History.

For comments on the manuscript, which was typed by Wendy Ramsell and Julie Leland, we thank Bill Bourne, Andrew Clarke, Peter Harrison, Keith Reid, David Snow, Dick Veit, François Vuilleumier and Mick Whitehouse.

### References:

- Bannasch, R. 1984. Bemerkenswerte Vogelbeobachtungen in der Antarktis. *Beitr. Vogelkd., Jena* 30: 149–152.
- Barré, H. 1976. Les "Gorfous de Schlegel" des Iles Crozet. *Com. Nat. Fr. Recherch. Antarct.* 40: 177–189.
- Beck, J. R. 1968. Unusual birds at Signy Island, South Orkney Islands, 1966–67. *Bull. Brit. Antarct. Surv.* 18: 81–82.
- Bennett, A. G. 1922. Notas sobre aves subantarticas. *Hornero* 2: 255–258.
- Berruti, A. 1981. The status of the Royal Penguin and Fairy Prion at Marion Island, with notes on feral cat predation on nestlings of large birds. *Cormorant* 9: 123–128.

- Blake, E. R. 1977. *Manual of Neotropical Birds*. Vol. 1. Univ. Chicago Press.
- Bourne, W. R. P. 1977. Albatrosses occurring off South Africa. *Cormorant* 2: 7–10.
- Bourne, W. R. P. 1988. Was it a Brown-hooded or Franklin's Gull at South Georgia. *Sea Swallow* 37: 64.
- Bourne, W. R. P. & Curtis, W. F. 1985. South Atlantic seabirds. *Sea Swallow* 34: 18–28.
- Bourne, W. R. P. & Curtis, W. F. 1986. South Atlantic bird islands. *Sea Swallow* 35: 24–34.
- Burger, A. E., Williams, A. J. & Sinclair, J. C. 1980. Vagrants and the paucity of land bird species at the Prince Edward Islands. *J. Biogeog.* 7: 305–310.
- Cheshire, M. W. 1990. Notes on seabird reports received in 1989. *Sea Swallow* 39: 18–36.
- Cheshire, M. W. 1993. Notes on seabird reports received in 1992. *Sea Swallow* 42: 5–15.
- Clark, G. S. 1986. Eighth record of the Emperor Penguin at South Georgia. *Cormorant* 13: 180–181.
- Conroy, J. W. H. 1971. Wilson's Phalarope (*Steganopus tricolor*) in the Antarctic. *Bull. Brit. Antarct. Surv.* 26: 82–83.
- Cordier, J. R., Mendez, A., Mougin, J.-L. & Visbeck, G. 1983. Les oiseaux de la Baie de l'Espérance, Peninsula Antarctique (63°24'S, 56°59'W). *Oiseau* 53: 143–176, 261–289, 371–390.
- Croxall, J. P. 1979. Distribution and population changes in the Wandering Albatross *Diomedea exulans* L. at South Georgia. *Ardea* 67: 15–21.
- Croxall, J. P., Prince, P. A., Hunter, I., McInnes, S. J. & Copestake, P. G. 1984. The seabirds of the Antarctic peninsula, islands of the Scotia Sea and Antarctic Continent between 80°W and 20°W: their status and conservation. Pp. 636–666 in J. P. Croxall, P. G. H. Evans & R. W. Schreiber (eds), *Status and Conservation of the World's Seabirds*. ICBP, Cambridge.
- Croxall, J. P., McCann, T. S., Prince, P. A. & Rothery, P. 1988. Reproductive performance of seabirds and seals at South Georgia and Signy Island, South Orkney Islands 1976–1986: Implications for Southern Ocean monitoring studies. Pp. 261–285 in D. Sahrhage (ed.), *Antarctic Ocean and Resources Variability*. Springer-Verlag, Berlin.
- Croxall, J. P. & Rothery, P. 1995. Population change in gentoo penguins *Pygoscelis papua* at Bird Island, South Georgia: potential roles of adult survival, recruitment and deferred breeding. Pp. 26–38 in P. Dann, I. Norman & P. Reilly (eds), *Penguins: Advances in Research and Management*. Surrey Beatty & Sons, Chipping Norton, NSW.
- Croxall, J. P., Rothery, P., Pickering, S. P. C. & Prince, P. A. 1990. Reproductive performance, recruitment and survival of Wandering Albatrosses *Diomedea exulans* at Bird Island, South Georgia. *J. Anim. Ecol.* 59: 773–794.
- Croxall, J. P., Steele, W. K., McInnes, S. J. & Prince, P. A. In press. Breeding distribution of the Snow Petrel *Pagodroma nivea*. *Mar. Ornithol.*
- Curtis, W. F. 1988. Highlights of a South Atlantic tour—1986/87. *Sea Swallow* 37: 3–7.
- Curtis, W. F. 1994. Further South Atlantic records, December 1991 to May 1992. *Sea Swallow* 43: 19–28.
- Delany, S. N., Edwards, D. V. & Williams, T. D. 1988. Brown-hooded Gull *Larus maculipennis*: first record for South Georgia. *Bull. Brit. Antarct. Surv.* 78: 53–54.
- Downes, M. C., Ealey, E. H. M., Gwynn, A. M. & Young, P. S. 1959. The birds of Heard Island. *ANARE Rep.* B1: 1–135.
- Eakin, R. R., Dearborn, J. H. & Townsend, W. C. 1986. Observations of marine birds in the South Atlantic Ocean in the late austral autumn. *Antarct. Res. Ser.* 44: 69–86.
- Escalante, R. 1984. Problemas en la conservación de dos poblaciones de láridos sobre la costa atlántica de Sud America (*Larus belcheri atlanticus* y *Sterna maxima*). *Rev. Mus. Arg. Cienc. Nat. (Zool.)* 13: 147–152.
- Gregory, P. 1994. Notes on new and scarce birds in the Falklands Islands. *Bull. Brit. Orn. Cl.* 114: 12–20.
- Humphrey, P. S., Bridge, D., Reynolds, P. W. & Peterson, R. T. 1970. *Birds of Isla Grande (Tierra del Fuego)*. Smithsonian Institution, Washington, D.C.
- Hunt, G. L. Jr, Priddle, J. H., Whitehouse, M. J., Veit, R. R. & Heywood, R. B. 1992. Changes in seabird species abundance near South Georgia during a period of rapid change in sea surface temperature. *Antarct. Sci.* 4: 15–22.
- Jehl, J. R., Todd, F.S., Rumboll, M. A. E. & Schwartz, D. 1978. Notes on the avifauna of South Georgia. *Gerfaut* 68: 534–550.

- Jouventin, P. 1990. Shy albatrosses *Diomedea cauta salvini* breeding on Penguin Island, Crozet Archipelago, Indian Ocean. *Ibis* 132: 126–127.
- Jouventin, P., Stahl, J.-C., Weimerskirch, H. & Mougou, J.-L. 1984. The seabirds of the French subantarctic islands and Adélie Land, their status and conservation. Pp. 609–625 in J. P. Croxall, P. G. H. Evans & R. W. Schreiber (eds), *Status and Conservation of the World's Seabirds*. ICBP, Cambridge.
- Kaiser, M. & Peter, H.-U. 1988. Kuhreiher *Ardeola ibis* (L.), in der Antarktis. *Beitr. Vogelkd., Jena* 34: 202–203.
- Kock, K.-H. & Reinsch, H. H. 1978. Ornithological observations during the "German Antarctic Expedition 1975/76". *Beitr. Vogelkd., Leipzig* 24: 305–328.
- Lambert, K. 1984. Der Kerguelensturmvogel *Pterodroma brevirostris* Lesson 1831 im Süd Atlantik. *Beitr. Vogelkd., Jena* 30: 191–202.
- Lazo, I. F. & Yáñez, J. 1989. First record of Black-necked Swan *Cygnus melanocoryphus* in South Shetland and Antarctica. *Polar Rec.* 25: 354.
- Marchant, J., Prater, T. & Hayman, P. 1986. *Shorebirds: An Identification Guide to the Waders of the World*. Christopher Helm, London.
- Marchant, S. & Higgins, P. J. (eds) 1990. *Handbook of Australian, New Zealand and Antarctic Birds*. Vol. 1. Ratites to Ducks. Oxford Univ. Press.
- Maxson, S. J. & Bernstein, N. 1980. Ecological studies of Southern Black-backed Gull, Blue-eyed Shag and Adélie Penguin at Palmer Station. *Ant. J. US* 15: 157.
- Meyer de Schauensee, R. 1971. *A Guide to the Birds of South America*. Oliver & Boyd.
- Murphy, R. C. 1936. *Oceanic Birds of South America*. American Museum of Natural History, New York.
- Naveen, R. 1989. First record of Long-tailed Jaeger for South Georgia. *Amer. Birds* 43: 17.
- Newton, I. P., Adams, N. J., Brown, C. R., Enticott, J. W. & Fugler, S. R. 1983. Nonmarine vagrant birds at the Prince Edward Islands, June 1981–May 1983. *Cormorant* 11: 35–38.
- Nores, M. & Yzurieta, D. 1981. Nuevas localidades para aves Argentinas. *Hist. Nat.* 2: 33–42.
- Orgeira, J. L. & Fogliatto, O. N. 1991. The Black-necked Swan in Antarctica. *Mar. Ornithol.* 19: 140–143.
- Pereyra, J. A. 1994. Descripción de un nuevo ejemplar de rávido de la Isla Georgia del Sur. *Hornero* 8: 484–489.
- Prince, P. A. & Copestake, P. G. 1990. Diet and aspects of Fairy Prion breeding at South Georgia. *Notornis* 37: 59–69.
- Prince, P. A. & Croxall, J. P. 1983. Birds of South Georgia: new records and re-evaluations of status. *Bull. Brit. Antarct. Surv.* 59: 15–27.
- Prince, P. A. & Payne, M. R. 1979. Current status of birds at South Georgia. *Bull. Brit. Antarct. Surv.* 48: 103–118.
- Prince, P. A., Rothery, P., Croxall, J. P. & Wood, A. G. 1994. Population dynamics of Black-browed and Grey-headed Albatrosses *Diomedea melanophrys* and *D. chrysostoma* at Bird Island, South Georgia. *Ibis* 136: 50–71.
- Ridgely, R. S. & Tudor, G. 1994. *The Birds of South America*. Vol. 2. The suboscine Passerines. Oxford Univ. Press.
- Rootes, D. M. 1988. The status of birds at Signy Island, South Orkney Islands. *Bull. Brit. Antarct. Surv.* 80: 87–119.
- Ross, G. J. B. 1986. On Shy Albatrosses *Diomedea cauta* in South African waters. *Cormorant* 13: 165–167.
- Rounsevell, D. E. & Brothers, N. P. 1984. The status and conservation of seabirds at Macquarie Island. Pp. 587–592 in J. P. Croxall, P. G. H. Evans & R. W. Schreiber (eds), *Status and Conservation of the World's Seabirds*. ICBP, Cambridge.
- Rumboll, M. A. E. & Jehl, J. R. 1977. Observations on pelagic birds in the South Atlantic Ocean in the austral spring. *San Diego Soc. Nat. Hist. Trans.* 19: 1–16.
- Stahl, J.-C., Weimerskirch, H. & Ridoux, V. 1984. Observations récentes d'oiseaux marins et terrestres visiteurs dans les Iles Crozet, sud-ouest de l'Océan Indien. *Gerfaut* 74: 39–46.
- Strange, I. J. 1979. Distribution of Cattle Egrets (*Bubulcus ibis*) to the Falkland Islands. *Gerfaut* 69: 397–401.
- Strange, I. J. 1992. *A Field Guide to the Wildlife of the Falkland Islands and South Georgia*. Harper Collins, London.

- Thurston, M. H. 1982. Ornithological observations in the South Atlantic Ocean and Weddell Sea, 1959–64. *Bull. Brit. Antarct. Surv.* 55: 77–103.
- Tickell, W. L. N. & Woods, R. W. 1972. Ornithological observations at sea in the South Atlantic Ocean, 1954–64. *Bull. Brit. Antarct. Surv.* 31: 63–84.
- Torres, D., Gajardo, M. & Valencia, J. 1986. Notas sobre *Bubulcus ibis* y *Eudypetes chrysolophus* de las islas Shetland del Sur. *Inst. Antarct. Chil. Ser. Cient.* 34: 73–79.
- Trivelpiece, S. G., Geupel, G. R., Kjelman, J., Myrcha, A., Sicinski, J., Trivelpiece, W. Z. & Volkman, N. J. 1987. Rare bird sightings from Admiralty Bay, King George Island, South Shetland Islands, Antarctica, 1976–1987. *Cormorant* 15: 59–66.
- Tuck, G. S. (ed.) 1975. Observations at sea of seabirds in the subantarctic and Antarctic zones south of 50°S—late November 1973 to late March 1974. *Sea Swallow* 24: 7–23.
- Urban, E. K., Fry, C. H. & Keith, S. 1986. *The Birds of Africa*. Vol. 2. Academic Press.
- Watson, G. E., Angle, J. P., Harper, P. C., Bridge, M. A., Schlatter, R. P., Tickell, W. L. N., Boyd, J. C. & Boyd, M. M. 1971. Birds of the Antarctic and Subantarctic. *Antarct. Map Folio Ser. Folio* 14: 18 pp.
- Weimerskirch, H., Zotier, R. & Jouventin, P. 1988. The avifauna of the Kerguelen Islands. *Emu* 89: 15–29.
- Woehler, E. J. (ed.) 1993. *The Distribution and Abundance of Antarctic and Subantarctic Penguins*. SCAR, Cambridge.
- Woods, R. W. 1988. *Guide to the Birds of the Falkland Islands*. Anthony Nelson, Oswestry.
- Woods, R. W. In press. *Atlas of Breeding Birds of the Falkland Islands*. Anthony Weston, Oswestry.

Addresses: P. A. Prince & J. P. Croxall, British Antarctic Survey, Natural Environment Research Council, High Cross, Madingley Road, Cambridge CB3 0ET, U.K.

© British Ornithologists' Club 1996

## Further on subspeciation in the Red-billed Francolin *Pternistis adspersus* (Waterhouse), 1838

by P. A. Clancey

Received 21 June 1995

The Red-billed Francolin is an endemic species of the northern aspects of the South West Arid Zone of the Afrotropics, which ranges from central and northern Namibia (south as far as *c.* 27°S) and southwestern Angola, east to the mid-Zambezi R. drainage in southwestern Zambia and northwestern Zimbabwe, being replaced to its immediate east by a closely allied congener in the form of the Natal Francolin, and to the south of its range in the west by the larger Cape Francolin. In their recent major revisionary study of the francolins, Crowe *et al.* (1992) group these three so-called partridge-francolins, following the generic recommendations of both Hall (1963) and Wolters (1976), along with a fourth species (Hildebrandt's Francolin), in the new subgenus *Notocolinus* in the resurrected genus *Pternistis* Wagler, 1832, the types of both being the Cape Francolin *Tetrao capensis* Gmelin, 1789. Crowe (1993) validated the introduction of the name *Notocolinus*, thereby becoming its sole author, as well as of three other subgenera of